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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Teddy Scott on or about 3-21-08.

Please entire the following amendments to the specification:

Please replace paragraphs 0118-0122 with the following paragraph:

[0118] Reference is now made to Fig. ~~16~~21A which is an annotated sequence of an EST comprising a novel gene detected by the gene detection system of the present invention. Fig. ~~16~~21A shows the nucleotide sequence of a known human non-protein coding EST (Expressed Sequence Tag), identified as EST72223. It is appreciated that the sequence of this EST comprises sequences of one known miRNA gene, identified as MIR98, and of one novel GAM gene, referred to here as GAM-4, detected by the bioinformatic gene detection system of the present invention, described hereinabove with reference to Fig. 9.

[0119] Reference is now made to Figs. ~~17A and 17B~~21B-21D that are

pictures of laboratory results, which when taken together demonstrate laboratory confirmation of expression of the bioinformatically detected novel gene of Fig. ~~16~~21A.

[0120] Referring to Fig. ~~17A~~21B which is a Northern blot analysis of MIR-98 and EST72223 transcripts. MIR-98 and EST72223 were reacted with MIR-98 and GAM-4 probes as indicated in the figure. It is appreciated that the probes of both MIR-98 and GAM-4 reacted with EST72223, indicating that EST72223 contains the sequences of MIR-98 and of GAM-4. It is further appreciated that the probe of GAM-4 did not cross-react with MIR-98.

[0121] With reference to Fig. ~~17B~~21B, a Northern blot analysis of EST72223 and MIR-98 transfections were performed, subsequently marking RNA by the MIR-98 and GAM-4 probes. Left, Northern reacted with MIR-98, Right, Northern reacted with GAM-4. The molecular Sizes of EST72223, MIR-98 and GAM-4 are indicated by arrows. Hela are control cells that have not been introduced to exogenous RNA. EST and MIR-98 Transfections are RNA obtained from Hela transfected with EST72223 and MIR-98, respectively. MIR-98 and EST are the transcripts used for the transfection experiment. The results indicate that EST72223, when transfected into Hela cells, is cut yielding known miRNA gene MIR-98 and novel miRNA gene GAM-4.

[0122] Referring to Figs. ~~17A~~21A and ~~17B~~21B, the following technical methods used are specified as follows: Transcript preparations: Digoxigenin (DIG) labeled transcripts were prepared from EST72223 (TIGER), MIR98 and predicted precursor hairpins by using a DIG RNA labeling kit (Roche Molecular Biochemicals) according to the ~~manufacture"s~~ manufacturer's protocol. Briefly, PCR products with T7 promoter at the 5" end or T3 promoter at the 3"end were prepared from each DNA in order to use it as a template to prepare sense and antisense transcripts, respectively.

Please delete paragraphs 0141-9174.

Please replace paragraph 9175 with the following paragraph:

~~Reference is now made to Fig. 672, which is a simplified diagram describing a novel bioinformatically detected regulatory gene, referred to here as Genomic~~ The Genomic Record 672 (GR672) gene~~, which~~ encodes an operon-like cluster of novel micro RNA-like genes, each of which in turn modulates expression of at least one target gene, the function and utility of which at least one target gene is known in the art.

Please replace paragraph 9181-9183 with the following paragraphs:

[9181] GAM334 RNA binds ~~complimentarily~~ complementarily to a target binding site located in an untranslated region of a GAM334 ~~TARGET~~ target RNA~~, which target~~

~~binding site corresponds to a target binding site such as BINDING SITE I, BINDING SITE II or BINDING SITE III of Fig. 334A~~, thereby inhibiting translation of a GAM334 TARGET target RNA into a GAM334 ~~TARGET PROTEIN~~target protein~~, both of Fig. 334A~~.

[9182] GAM390 RNA binds ~~complimentarily~~ complementarily to a target binding site located in an untranslated region of a GAM390 ~~TARGET~~ target RNA~~, which target binding site corresponds to a target binding site such as BINDING SITE I, BINDING SITE II or BINDING SITE III of Fig. 390A~~, thereby inhibiting translation of a GAM390 TARGET target RNA into a GAM390 ~~TARGET PROTEIN,~~target protein ~~both of Fig. 390A~~.

[9183] It is appreciated that specific functions, and accordingly utilities, of the GR672 ~~GENE~~ gene correlate with, and may be deduced from, the identity of the target genes, which are inhibited by GAM RNAs comprised in the operon-like cluster of the GR672 ~~GENE~~gene: GAM334 TARGET PROTEIN target protein and GAM390 ~~TARGET PROTEIN~~target protein. The function of these target genes is elaborated hereinabove with reference to ~~334D and 390D~~ Table 1 and Table 2.

Please delete paragraph 9184-9412.

Conclusion

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. § 1.6(d)). The official fax telephone number for the Group is 571-273-8300. NOTE: If Applicant does submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane Zara whose telephone number is (571) 272-0765. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Douglas Schultz, can be reached on (571) 272-0763. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jane Zara
4-1-08
/Jane Zara/
Primary Examiner, Art Unit 1635